REMARKS

Reconsideration of the application is requested.

Claims 9-18 remain in the application. Claims 9-18 are subject to examination. Claim 9 has been amended.

Claim 9 has been amended to correct a minor typographical error. The change is not made for purposes of overcoming the prior art.

Under the heading "Claim Rejections – 35 USC § 103" on page 3 of the above-identified Office Action, claims 9-11 and 14 have been rejected as being unpatentable over U.S. Patent No. 6,671,256 to Xiong et al., U.S. Patent No. 6,882,766 to Corbalis et al. and further in view of U.S. Publication No. 2002/0114043 A1 to Kozaki et al. under 35 U.S.C. § 103. Applicant respectfully traverses.

With respect to claim 9, the Examiner states that Xiong teaches:
1) "a method for transmitting data packets between a first communication network node and a second communication network node; 2) "reserving a data channel" ; 3) "transmitting a first data burst having aggregated data packets" on the data channel; 4) "retaining the data channel for a consecutive transmission phase" after transmitting a first data burst.

With respect to 1) "a method for transmitting data packets…": Only the transmission of a burst is disclosed by Xiong. The purpose of the Xiong invention is disclosed in column 2, lines 37-40 which states: "The present invention provides yet another technical advantage by reducing the gaps/voids between bursts transmitted on reserved data channels, which in turn increase the data channel utilization." Xiong describes only the transmission of a data burst and not the transmission of non aggregated (IP) data packets on-the-fly as required by claim 9. This general feature does neither explain how the data packets are transmitted nor if a data burst and non aggregated data packets are transmitted. In contrast to Xiong, in the present invention, bursts and data packets are transmitted (FIG 2).

With respect to 2) "reserving a data channel…": In a conventional optical burst switching system, first a time slot is reserved for transmitting a data burst, and the channel is only blocked for other connections while the data burst is transmitted. Xiong uses this method for conventional transmission of data bursts too. Xiong describes (column 9, lines 66-67 and more exact in column 4, lines 33-47 and in addition column 8, lines 27-42) that according to his invention a channel (wavelength) in a "reserved state" is completely reserved for the transmission via a single connection; that means the channel is blocked for all other connections and "bursts cannot be scheduled on the reserved data channel in the normal way" (column 4, lines 44-47). The channel reservation is controlled by the traffic at the sending node and only this node cancels the reservation when the traffic drops below a threshold (column 8, lines 35-38).

According to the claimed invention, the channel λ1 is first reserved for the transmission of a single data burst BURST1. This is the standard burst reservation method, which is explained in paragraph [0017] of the filed Substitute Specification. Then the connection – not the reservation – is retained for transmitting data packets in the consecutive phase. According to paragraphs [0017] and [0018] the consecutive phase is regarded as free and can be interrupted for other burst traffic connections transmitting BURST2 (FIG 2 and [0017]) as soon as this is required. The channel is not blocked as taught by Xiong (column 4, lines 33-47), but can be used for additional connections.

With respect to 3) "transmitting a first data burst having aggregated data packets…": Xiong and the system in the instant invention transmit a first data burst (and a plurality of bursts) via a new connection. However, in the instant invention, after the first burst is transmitted and the channel is available during the consecutive phase, only data packets are transmitted on-the-fly.

With respect to 4) "retaining the data channel for a consecutive transmission phase….": This cannot be derived from Fig 2 showing an optical network. The passages cited by the Examiner, namely Column 10, lines 9-10 and column 9, lines 14-17, on the other hand, refer to the reservation and termination of a channel by a burst transmitting ingress node itself. According to Xiong, the channel is reserved by a channel reservation bit. If the channel has to be terminated, an "unreserved channel bit RD = 0" is sent (Column 9, lines 14-18).

Xiong teaches a reservation of the data channel as explained under 2), which is quite different from retaining this channel for further transmission of non aggregated data packets as already explained above. According to the instant invention, the “retaining connection” is used to transmit further data packets over the channel. The connection is interrupted as soon the channel is needed for another connection.

The Examiner states (page 4 first paragraph) that Xiong is silent, but Corbalis teaches terminating the connection only when the data channel is at least partially required for transmitting a second data burst. Applicants respectfully disagree that Corbalis discloses this limitation. It is respectfully submitted that the Examiner's statement that "while data packets are transmitted on-the-fly" is erroneous. Corbalis does not disclose that "data packets are transmitted on-the-fly". Additionally, Corbalis refers to an optical switch fabric, not a burst switching system. Nor does the reference disclose the connection between the nodes or how a connection in a burst switching system is reserved or terminated. More specifically, Corbalis, (at Column 1, lines 53-59) states: "Problems with rearrangeable nonblocking switches include the fact that the required device settings to route connections through the switch are not determined easily and that connections in progress may have to be interrupted momentarily while rerouting takes place to handle the new connections." Significantly, this is an unwanted interruption that causes a failure. Therefore, Corbalis teaches away from the claimed feature and suggests a redundant switch to avoid unnecessary interruptions (abstract).

Therefore, in contrast to claim 9, the combination of Xiong and Corbalis does not disclose a burst switching system where a connection is reserved when a burst is transmitted and only terminated when data packets are transmitted on-the-fly.

Then the Examiner states, on page 4 of the Office Action, third paragraph that: "Combination of Xiong and Corbalis is silent, but Kozaki teaches transmitting additional non-aggregated data packets on-the-fly between the nodes during the consecutive transmission phase (Para [0014], burst data may be transmitted on real time property or on the fly such that state that a delay is reduced as much as possible)." Applicants respectfully disagree.

Kozaki, at paragraph [0014], reads: “The data to be input into the buffer memory 25a of the slave station apparatus 20-1 are periodic data 26a, and the data to be input into the buffer memory 256 are burst data 266. The data reading section 24 makes control so as to read the periodic data 26a in the buffer memory 25a in preference to the burst data 266 in the buffer memory 25a in preference to the burst data 26b in the buffer memory 25b. This is because the burst data to be input in the burst manner do not normally require real-time property unlike sound data, and even if transmission is delayed to a certain extent, all of the burst data may the transmitted, but as the periodic data require real-time property, it is necessary that the periodic data have periodicity and are transmitted in a state that a delay is reduced as much as possible”.

Kozaki discloses a burst transmission system "where periodic data and burst data are multiplexed ...." See, paragraph [0020]. The data streams are transmitted by two different data sources. The first data stream is transmitted periodically, and the second data stream is converted into bursts and inserted between the periodic data (FIG. 11). Therefore, Kozaki does not disclose transmitting data packets on-the-fly, as required by claim 9. Significantly, in the claim 9, a single data stream is transmitted as bursts and as data packets on-the-fly to gain a better transmission performance.

Therefore the combination of teachings in Xiong, Corbalis, and Kozaki would not have suggested the invention as defined by claim 9.

Additionally, with respect to claim 11, the Examiner cites Xiong at column 2, lines. 16-19. This paragraph describes the reservation mechanism, not that the reservation is only possible during a consecutive phase. That is, according to the instant invention, data packets are transmitted on-the-fly and that the data channel is not reserved for the consecutive phase. This is contrary to Xiong. Xiong does not disclose the transmission of data packets on-the-fly during a consecutive phase. Rather, according to Xiong, the channel is reserved (Column 9, line 66 - Column 10, line 11) or not reserved Column 9, lines 14-18).

Under the heading "Claim Rejections – 35 USC § 103" on page 6 of the above-identified Office Action, claims 12-13 and 18 have been rejected as being unpatentable over U.S. Patent No. 6,671,256 to Xiong et al., U.S. Patent No. 6,882,766 to Corbalis et al., U.S. Publication No. 2002/0114043 A1 to Kozaki et al. and further in view of U.S. Patent No. 6,167,042 to Garland et al. under 35 U.S.C. § 103. Applicant respectfully traverses.

The invention as defined by claims 12-13 and 18 would not have been suggested for the reasons given above with regard to claim 9 and the teachings in Xiong, Corbalis, and Kozaki.

Under the heading "Claim Rejections – 35 USC § 103" on page 7 of the above-identified Office Action, claim 15 has been rejected as being unpatentable over U.S. Patent No. 6,671,256 to Xiong et al., U.S. Patent No. 6,882,766 to Corbalis et al., U.S. Publication No. 2002/0114043 A1 to Kozaki et al. and further in view of U.S. Publication No. 2003/0007219 A1 to Stilling under 35 U.S.C. § 103. Applicant respectfully traverses.

The invention as defined by claim 15 would not have been suggested for the reasons given above with regard to claim 9 and the teachings in Xiong, Corbalis, and Kozaki.

Under the heading "Claim Rejections – 35 USC § 103" on page 8 of the above-identified Office Action, claims 16-17 have been rejected as being unpatentable

over U.S. Patent No. 6,671,256 to Xiong et al., U.S. Patent No. 6,882,766 to Corbalis et al., U.S. Publication No. 2002/0114043 A1 to Kozaki et al. and further in view of U.S. Patent No. 6,167,042 to Garland et al. under 35 U.S.C. § 103. Applicant respectfully traverses.

The invention as defined by claims 16 and 17 would not have been suggested for the reasons given above with regard to claim 9 and the teachings in Xiong, Corbalis, and Kozaki.

It is accordingly believed to be clear that none of the references, whether taken alone or in any combination, either show or suggest the features of claim 9. Claim 9 is, therefore, believed to be patentable over the art. The dependent claims are believed to be patentable as well because they all are ultimately dependent on claim 9.

In view of the foregoing, reconsideration and allowance of claims 9-18 are solicited.

In the event the Examiner should still find any of the claims to be unpatentable, counsel would appreciate receiving a telephone call so that, if possible, patentable language can be worked out.

Petition for extension is herewith made. The extension fee for response within a period of three month pursuant to Section 1.136(a) in the amount of $1,110.00 in accordance with Section 1.17 is enclosed herewith.

Please charge any other fees that might be due with respect to Sections 1.16 and 1.17 to the Deposit Account of Lerner Greenberg Stemer LLP, No. 12-1099.

Respectfully submitted,

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MPW:cgm

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